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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,805	04/13/2004	Mitsuo Ueda	2004_0575A	2904

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EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/822,805	<b>Applicant(s)</b> UEDA ET AL.	
	<b>Examiner</b> Judson H. Jones	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) *   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) ,<br>Paper No(s)/Mail Date <u>080504</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 1-50 are objected to because of the following informalities: It isn't clear what applicant means by making the mover freely vibrate or by the free vibration state of the mover. Air provides a damping force for a vibrating device and gravity provides another damping force. Therefore the device ought to be operating in a vacuum far from any large mass to be free from air resistance and from the influence of gravity. According to claim 8 the current to the mover is temporarily cut off so that the mover freely vibrates while according to claim 9 the load is disconnected from a vibrator so that the mover freely vibrates. The implication is that either cutting the current or disconnecting the load would allow the mover to freely vibrate, but it would appear that both are required for free vibration. Appropriate correction is required.

Claims 1-50 are objected to because of the following informalities: The phrase "a spring constant decision unit for deciding a spring constant" seems misleading. See Shimada et al. 6,880,403 column 6 lines 40-45. The spring constant is not some arbitrary number chosen by a device maker. Once the units for the spring constant are decided, the number can be calculated or determined. See applicant's specification page 16, "the processing for calculating the spring constant is performed after assembling the linear vibration motor." In other places applicant does use the word decided instead of calculated, but that could be due to translation issues. See also applicant's claim 4 where the process for calculating the spring constant is explained.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-50 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Claims that fail to recite something other than a constant (either the spring constant as in claim 1 or a mass/spring ratio as in claim 13) are not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). According to applicant's specification page 80 "... the mover position calculation unit performs position calculation for obtaining the position of the mover on the basis of the driving current Cdr and the driving Vdr which are applied to the linear vibration motor 100 using the spring constant k ...". Essential subject matter needs to be in the claims so that the claimed device will operate properly and for this device, the driving current and driving voltage are needed for calculating the position of the mover.

***Allowable Subject Matter***

Claims 1-50 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or teach using the spring constant for calculating the position of the mover in a linear vibration motor where the free vibration state of the mover has been determined and used to determine the spring constant as recited in claims 1 and 5. The prior art of record does not disclose or teach using the mass/spring ratio for calculating the position of the mover in a linear vibration motor where the free vibration state of the mover has been determined and used to determine the mass/spring ratio as recited in claims 13 and 17.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshida et al. 6,960,893 B2 teaches in column 5 lines 30-33 setting the natural frequency of a resonant device upon start. Ueda et al. 6,977,474 B2 teaches in column 45 lines 42-44 using the elastic value of a spring member to set a predetermined reference position limit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H. Jones whose telephone number is 571-272-2025. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Judson H. Jones 5/12/2006



KARL TAMAI  
PRIMARY EXAMINER